

Amendments to the Claims:

This listing of claims is submitted to replace the prior version claims in the application:

Listing of Claims

Claim 1. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first resistor coupled to the inverting input terminal;

a second resistor coupled to the non-inverting input terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration to couple to the inverting output terminal, the non-inverting output terminal, the inverting input terminal, and the non-inverting input terminal to form a feedback network, the resistive feedback network further comprising a third resistor, a fourth resistor, a fifth resistor, a sixth resistor, a first match resistor, and a second match resistor, wherein a first terminal of the third resistor is coupled to the non-inverting output terminal and a first terminal of the first match resistor, a second terminal of the third resistor is coupled to the inverting input terminal and a first terminal of the second match resistor, a second terminal of the fourth resistor is coupled to the non-inverting input terminal and a first terminal of the fifth resistor, a second terminal of the fifth resistor is coupled to a second terminal of the first match resistor, and a second terminal of the sixth resistor is coupled to a second terminal of the second match resistor;

wherein the resistive feedback network further comprises a seventh resistor and an eighth resistor, wherein a first terminal of the seventh resistor is coupled to the inverting input terminal, a second terminal of the seventh resistor is coupled to the second terminal of the fifth resistor, a first terminal of the eighth resistor is coupled to

the non-inverting input terminal, and a second terminal of the eighth resistor is coupled to the second terminal of the sixth resistor.

Claim 2.(Cancelled)

Claim 3.(Cancelled)

Claim 4. (Currently Amended) The line driver of claim 2-1, further comprising:
a ninth resistor and a tenth resistor, wherein a first terminal of the ninth resistor is coupled to the non-inverting input terminal, a second terminal of the ninth resistor is coupled to the first terminal of the third resistor, a first terminal of the tenth resistor is coupled to the inverting input terminal, and a second terminal of the tenth resistor is coupled to the first terminal of the fourth resistor.

Claim 5. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

 a first input resistor coupled to the inverting input terminal;
 a second input resistor coupled to the non-inverting input terminal;
 a first impedance matching resistor coupled to the non-inverting output terminal;
 a second impedance matching resistor coupled to the non-inverting output terminal; and

 a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes:

 a first resistor unit including a first resistor connected to the first impedance matching resistor and the inverting input terminal and a second resistor connected to the second impedance matching resistor and the non-inverting input terminal;

 a second resistor unit including a third resistor connected to the non-inverting output terminal and the inverting input terminal and a fourth resistor

connected to the inverting output terminal and the non-inverting input terminal;
~~wherein each of the first resistor unit, the second resistor unit, the third resistor unit, the fourth resistor unit, the fifth resistor unit, and the impedance matching resistor unit includes a plurality of resistors in symmetric configuration~~

a third resistor unit including a fifth resistor connected to the second impedance matching resistor ~~unit~~ and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor ~~unit~~ and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

Claim 6. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor coupled to the inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor coupled to the ~~non~~-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes only three of the following four resistor units comprising:

a first resistor unit including a first resistor connected to the first impedance matching resistor and the inverting input terminal and a second resistor connected to the second impedance matching resistor and the non-inverting input terminal;

a second resistor unit including a third resistor connected to the non-inverting output terminal ~~and the inverting input terminal~~ and a fourth resistor connected to the inverting output terminal and the non-inverting input terminal;

a third resistor unit including a fifth resistor connected to the second impedance matching resistor ~~unit~~ and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor ~~unit~~ and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

Claim 7. (Currently Amended) A line driver, comprising:

a differential amplifier having an inverting output terminal, a non-inverting output terminal, an inverting input terminal, and a non-inverting input terminal;

a first input resistor coupled to the ~~non~~-inverting input terminal;

a second input resistor coupled to the non-inverting input terminal;

a first impedance matching resistor coupled to the non-inverting output terminal;

a second impedance matching resistor coupled to the non-inverting output terminal; and

a resistive feedback network, having a plurality of resistors in symmetric configuration, wherein the resistive feedback network further includes:

a first resistor unit including a first resistor connected to the first impedance matching resistor and the inverting input terminal and a second resistor connected to the second impedance matching resistor and the non-inverting input terminal, and one of the following ~~three~~ two resistor units comprising:

~~a second resistor unit including a third resistor connected to the non-inverting output terminal and the inverting input terminal and a fourth resistor connected to the inverting output terminal and the non-inverting input terminal;~~

a third resistor unit including a fifth resistor connected to the second impedance matching resistor ~~unit~~ and the inverting input terminal and a sixth resistor connected to the first impedance matching resistor ~~unit~~ and the non-inverting input terminal; and

a fourth resistor unit including a seventh resistor connected to the inverting output terminal and the inverting input terminal and a eighth resistor connected to the non-inverting output terminal and the non-inverting input terminal.

Claim 8. (Canceled)